

Abstract of the Invention

A multipressure plenum system for supporting a conveyor belt of a gas supported belt conveyor and method of operation. The multipressure plenum system includes a multipressure plenum having a support surface including a plurality of apertures and a chamber in fluid communication with the apertures. The chamber of the plenum is in selective fluid communication with a first source of gas at a first pressure, and is in selective fluid communication with a second source of gas at a second pressure. Gas from the first source of gas at the first pressure flows through the apertures in the plenum to form a gas cushion which supports the conveyor belt above the plenum. Gas from the second source of gas at the second pressure selectively flows through the apertures in the plenum to provide additional support to the conveyor belt.